Code No: 824AF

| **R15** |

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA IV Semester Examinations, June/July - 2018
DISTRIBUTED SYSTEMS

Time: 3hrs   Max.Marks:75

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A

5×5 Marks = 25

1.a)	Describe the limitations of distributed systems.	[5]
b)	Explain RMI.	[5]
c)	Define cast communication.	[5]
d)	Mention the locking rules for nested transaction.	[5]
e)	With an example discuss about digital signature.	[5]

PART - B

5×10 Marks = 50

2.a)	Discuss design issues of Distributed Systems.	
b)	Discuss Network Technologies and Protocols in Distributed Systems.	[5+5]

OR

3.	Explain Interprocess communication in detail.	[10]

4.a)	Distinguish between processes and Threads.	
b)	Explain various distributed file system components in detail.	[5+5]

OR

5.a)	Discuss about X.500 Directory structure.	
b)	Explain the concept of Process creation and communication.	[5+5]

6.	Explain following Synchronizing physical clocks.	
	a) Cristian's method for synchronizing clocks.	
	b) The Berkeley algorithm.	[5+5]

OR

7.a)	Explain Atomic commit protocol.	
b)	Explain Network Time Protocol.	[5+5]

8.a)	Explain distributed deadlocks.	
b)	Explain Hierarchical and group masking of faults.	[5+5]

OR

9.a)	Distinguish cache consistency from replica consistency.	
b)	Characterize a distributed system. Explain the term – Transparency.	[5+5]

10.a)   Discuss digital signatures with public keys and with secret keys.
    b)   Write about key distribution.   [5+5]

<center>**OR**</center>

11.   Explain the following
        a) Nested transactions
        b) Release consistency and Munin.   [5+5]

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